

ENGINEERING FORUM TELECONFERENCE MINUTES

July 5, 2000

Technical Issue

Region 8 has requested input on a chrome-plating facility, where hexavalent chromium (CR(6)) soil concentrations range up to 36,000 ppm in the source area beneath the tanks, and ground-water concentrations range up to 200 ppm. The facility is currently operating an interim measure: they are injecting calcium polysulfide into the ground water through numerous (20-30+) injection wells. They are monitoring ground-water concentrations in a series of compliance wells located immediately downgradient of the injection wells. This interim measure system has been operating for more than a year, yet they are still out of compliance in several wells. EPA is concerned about the effectiveness of this type of remedy because the facility will push to make this the "final remedy" for the site, since they perceive it to be a low cost remedy.

Recently, the facility began a voluntary pilot study to test the effectiveness of using calcium polysulfide on the soils. EPA is concerned that the delivery will be problematic and that this is not a good remedy for the soils (or for the groundwater.) Bill Rothenmeyer (Region 8) asked forum members if they have experience using calcium polysulfide to reduce concentrations of Cr(6) in soils or ground water.

Marta Richards (NRMRL-Cincinnati) commented on a site in California that has been using calcium polysulfide injection since 1988. Cr(6) has been reduced at this site, but not completely. One problem with calcium polysulfide injection is the large increase in sulfate—as much as 600 ppm. Sulfate and carbonate precipitation can plug up the soil. The facility needs to conduct geochemical tests or modeling to determine what the other geochemical affects on the soil might be.

Roger Carlton (Region 4) suggested (via email) the use of zero valent iron in a barrier wall for reducing the Cr(6) to Cr(3). Bill mentioned that the use of barrier walls would be very costly to the facility and they would prefer a more cost-effective method of remediation.

Ed Mead (USACE) and Steve White (USACE) mentioned a non-patented treatment process that involves the injection of calcium polysulfide solution into the soil/plume that IT is currently using in the U.S. and Australia. For more information on this treatment, visit: <http://gwrp.cciw.ca/lists/biogroup/1999.11/msg00038.html>.

Trish Erickson (NRMRL-Cincinnati) suggested reviewing a new (9/99) report from her lab about Cr(6) reduction using permeable reactive barriers. This report applies just to ground water: *An In Situ Permeable Reactive Barrier for the Treatment of Hexavalent Chromium and Trichloroethylene in Ground Water; Vol 1, Design and Installation* (EPA/600/R-99/095a) and *Vol 2, Performance Monitoring* (EPA/600/R-99/095b). Both are available on the web at <http://www.epa.gov/ada/reports.html>

Screening Data Collection Paper

The screening data collection paper is currently undergoing peer review, with JoAnn Camacho (OERR/ERT) and Ed Mead (USACE-Omaha) reviewing. Ed will flesh out the matrix and distribute it to the forum for comment. He suggested including material and time costs in the paper. On-site costs would be difficult to estimate, but costs per kit/per sample could be estimated, as well as general “rules of thumb.” Ed and JoAnn will finish populating the chart and get back to the committee for input sometime in August. The chart will then be forwarded to Trish Erickson (NRMRL-Cincinnati) for input.

5-year Review/RSE Paper

The Forum committee will draft this paper at the October meeting work session. Those on the committee should be familiar with the 5-year Review guidance and the documents found on the USACE website (<http://www.environmental.usace.army.mil>).

Update on Design Issues of Water Treatment Plants

Trish Erickson (NRMRL/Cincinnati) indicated that the summer intern who will help with the update begins work at EPA on July 15. The intern will participate in the August conference call, but the forum should not expect a report until September. Ken Lovelace (HQ) wanted to remind the forum that there is a presumptive guidance for ground-water remedies that has been issued. In addition, TIO has an optimization study of ground-water pump and treat systems underway.

Oxygenate Issue Paper

Trish Erickson produced an excellent first draft of the oxygenates paper, and it has been reviewed by the committee. The contractor has the document and should complete a draft final by August 1. Any forum members who would like to review the paper should send an email to one of the co-chairs.

Construction Equipment Manual Update

Stephen Nussbaum distributed the Construction Equipment Manual to forum members via email on May 23, 2000. JoAnn Cola thanked Stephen for the excellent effort. Some minor changes, including the addition of a TSP cover page, need to be made to the document before EMS places a downloadable copy of the manual on the TSP website (www.epa.gov/tio/tsp).

List of Branch Chiefs and Division Directors

JoAnn Cola indicated that a draft version of Rich Steimle's (TIO) mailing list of branch chiefs and division directors in the RCRA and Superfund programs has been completed and was distributed to forum members for comments and edits. JoAnn will distribute the list once again; if anyone has suggestions, additions, or deletions, send them to JoAnn as soon as possible so that they can be incorporated into the distribution list for the next accomplishments report.

Meetings

Fall TSP Meeting

The next TSP meeting will be held in Charleston, South Carolina, during the week of October 23. Monday and Friday will be travel days. There will be a two day NGWA geochemistry course offered Thursday and Friday at no additional training cost to participants. Forum members should let one of the co-chairs know as soon as possible if they are interested in participating.

The Federal Facilities Forum is exploring the possibility of having an off-site meeting with the Navy on Thursday. Camille recommended reserving at least one day for the business sessions. Region 5 has been brainstorming for potential topics for the technical sessions. Tony Holoska mentioned that the Region is exploring topics that will be both interesting and useful to a wide range of participants. Forum members suggested that if an outside firm is invited to speak, they should present a case study detailing an application of their product or service at a government site. Region 5 could also look into a TIO training course on *in situ* thermal treatment. Superfund site reuse is another timely topic that could be considered. Tony Holoska will compile a list of potential topics and distribute the list to forum members for discussion. The speakers should be confirmed in writing; an email confirmation will suffice. Members should note that the forum cannot pay for presenters' travel expenses.

Spring 2001 TSP Meeting

The Engineering Forum is responsible for identifying a location for the spring 2001 meeting of the TSP. The spring meeting will be fully supported and would be a good time to have a roundtable session. JoAnn

Camacho (ERT/Edison) recommended the dioxin reassessment as a potential focus for the meeting, as the new policy may be issued around that time. The forum could have a panel discussion with David Cooper (HQ) on treatment and containment options. The sediment remediation guidance, which should be issued this summer, was also suggested as a potential topic. JoAnn Cola mentioned that both of these topics were excellent suggestions, and that perhaps both could be incorporated into the spring meeting.

A committee needs to be formed to explore topics, firm up dates and times, and determine a location. These issues will be discussed further in Charleston. A list of names for the committee should be firmed up by the September conference call. Some suggestions for possible locations: New Orleans, Chicago, Denver, Omaha. Camille suggested that the meeting be held in the Midwest this time around. The co-chairs welcome input from forum members.

Next Engineering Forum Teleconference Call

The next Engineering Forum conference call is scheduled for Wednesday, August 2, 2000, from 12:30-2:00 pm EDT. The call in number is (202) 260-7280, and the access code is 8878#. JoAnn Cola will be the co-chair lead for the call. Region 9 will lead the technical topic.

Attendees

Chet Janowski, Region 1
Tony Holoska, Region 5
Kaushalya Khanna, Region 5
Camille Hueni, Region 6
Bill Rothenmeyer, Region 8
JoAnn Cola, Region 9
Cynthia Wetmore, Region 9
JoAnn Camacho, ERT/Edison

Trish Erickson, NRMRL-Cincinnati
Marta Richards, NRMRL-Cincinnati
Ed Mead, USACE-Omaha
Steve White, USACE-Omaha
Jim Harrington, NYSDEC
Keith Arnold, EMS, Inc.